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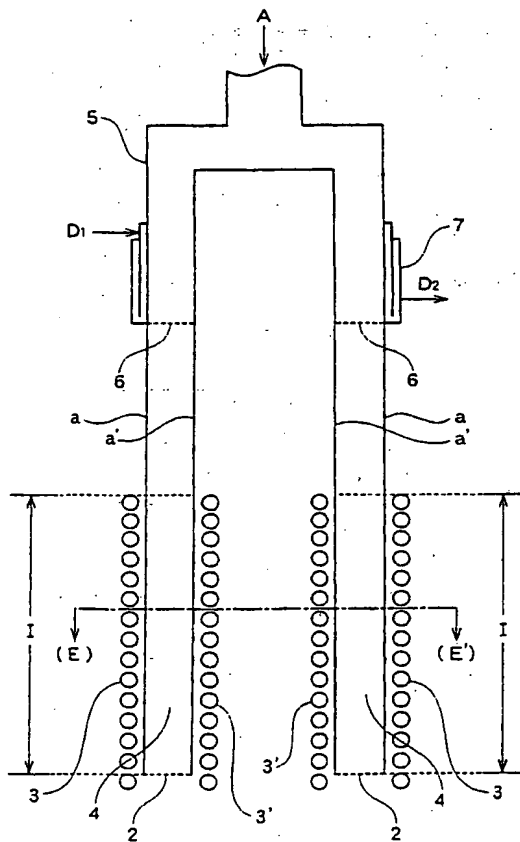
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- (51) 国際特許分類⁷: C01B 33/035 (72) 発明者; および
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特願2002-176653 2002 年 6 月 18 日 (18.06.2002) JP (74) 代理人: 鈴木 俊一郎 (SUZUKI, Shunichiro); 〒141-0031 東京都 品川区 西五反田七丁目 1 3 番 6 号 五反田山崎ビル 6 階 鈴木国際特許事務所 Tokyo (JP).
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(54) Title: REACTION APPARATUS FOR PRODUCING SILICON

(54) 発明の名称: シリコン製造用反応装置



(57) Abstract: A reaction apparatus for producing silicon has a reaction container that forms space surrounded by a vertically extending wall and heating means capable of heating at least part of a surface of the wall including the lower part of the wall that faces the space to a temperature higher than the melting point of silicon. Raw material gas for silicon separation is circulated from the upper part to the lower part of the space of the reaction container. Because the space of the reaction container has a slit shape as seen in a transverse cross-section, reduction in raw material gas reaction rate and forming of a by-product are improved, and productivity is improved remarkably.

(57) 要約: 上下方向に延在する壁により囲まれた空間を形成した反応容器と、該壁の下端部を含む少なくとも一部分の上記空間に面する表面をシリコンの融点以上に加熱することが可能な加熱手段とを有し、上記反応容器の空間の上部より下部に向けてシリコン析出用原料ガスを流通させるようにしたシリコン製造用反応装置において、上記反応容器の空間が、横断面視でスリット形状を成すことにより、該装置をスケールアップした際に課題となる原料ガスの反応率の低下、および副生成物の生成を改善し、生産効率を大幅に改善したシリコン製造用反応装置に関する。

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2文字コード及び他の略語については、定期発行される
各PCTガゼットの巻頭に掲載されている「コードと略語
のガイダンスノート」を参照。

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP03/07657

A. CLASSIFICATION OF SUBJECT MATTER
Int.Cl⁷ C01B33/035

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
Int.Cl⁷ C01B33/02

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Jitsuyo Shinan Koho 1926-1996 Toroku Jitsuyo Shinan Koho 1994-2003
Kokai Jitsuyo Shinan Koho 1971-2003 Jitsuyo Shinan Toroku Koho 1996-2003

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2002-29726 A (Tokuyama Corp.), 29 January, 2002 (29.01.02), Claims & WO 01/85613 A1 & AU 5667001 A	1-4
A	US 4176166 A (Justice N. CARMAN), 27 November, 1979 (27.11.79), Claims & JP 56-63813 A Claims & DE 2938670 A1 & GB 2059405 A & FR 2465684 A1	1-4

☒ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

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International application No.

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 59-121109 A (Denki Kagaku Kogyo Kabushiki Kaisha), 13 July, 1984 (13.07.84), Claims (Family: none)	1-4